

## Engineering Checklist for On-Site Grading / Drainage / Stormwater / Site Improvement Plan

**Instructions:** This checklist provides advance notification to applicants of the City of Campbell's requirements for final on-site grading and drainage plans. Using this checklist will expedite your application through the City's review process. While this checklist summarizes major and typical topics of review, site specific issues can and will produce additional comments.

Prior to submitting a final on-site grading and drainage plan, please place an "X" in the box indicating that you have complied or that the particular item does not apply.

This checklist references standard CAD sheets, benchmarks, and stormwater requirements that can be found on our website at: <https://www.campbellca.gov/206>

Project Address: \_\_\_\_\_

Reviewer / Date: \_\_\_\_\_

**Yes**    **N/A**

### **ITEM OR DESCRIPTION**

#### *Procedural Requirements*

- |                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Project has Environmental Clearance?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Elevation Certificate? (if necessary)  |
| <input type="checkbox"/> | <input type="checkbox"/> | Notice of Intent (NOI) filed - for sites disturbing one acre or more of land. Provide confirmation of submittal to the Regional Water Quality Control Board. |

#### *Formatting Requirements*

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Plan based on City standard on-site title sheet with applicable notes?          |
| <input type="checkbox"/> | <input type="checkbox"/> | 24"X36" sheet size used, including City Standard borders for subsequent sheets? |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan includes Campbell specific Blueprint for a Clean Bay Plan Sheet?           |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan drawn clearly? (Topo and all text is legible)                              |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan drawn to appropriate Engineer's Scale? (Min. 10ft/inch - Max. 40ft/inch)   |
| <input type="checkbox"/> | <input type="checkbox"/> | Scale shown on every sheet?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan includes a vicinity map?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan includes a north arrow?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan includes a complete standard legend which is implemented in drawings?      |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan includes approval signature block?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan includes standard grading notes?   |
| <input type="checkbox"/> | <input type="checkbox"/> | All adjacent streets labeled correctly?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Lots numbered and dimensioned per final map?                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | Sheet numbers on all sheets? (i.e. Sheet 2 of 3)                                |
| <input type="checkbox"/> | <input type="checkbox"/> | NOI WDID number printed in large font on title sheet? (if applicable)           |
| <input type="checkbox"/> | <input type="checkbox"/> | Off-site improvements screened back with note to see approved off-site plan?    |
| <input type="checkbox"/> | <input type="checkbox"/> | Engineer's name, number, expiration date and signature included on all sheets?  |

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Yes    N/A

ITEM OR DESCRIPTION

*Technical Requirements*

- |                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Reference to City Benchmark? (See website for list of benchmarks)  |
| <input type="checkbox"/> | <input type="checkbox"/> | Existing and proposed easement lines shown?  |
| <input type="checkbox"/> | <input type="checkbox"/> | If a subdivision, are proposed monuments shown to avoid conflict with proposed walls, fences, and other surface improvements? <b>Please note that a Certificate of Correction will be required if monuments cannot be set in locations shown on the associated subdivision map due to field conflicts.</b> |
| <input type="checkbox"/> | <input type="checkbox"/> | Quantities of cut, fill, import and export shown on plan in cubic yards (CY)?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan shows existing ground contours?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Property limits shown?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Spot elevations shown on-site?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Spot elevations shown off-site, sufficient to allow assessment of potential stormwater impacts/runoff on adjacent properties?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Proposed elevations at high points, grade breaks, and other significant locations?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Flow lines, or at least top of curb elevations shown?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Grades of paved areas > 1% for PCC and > 1.5% for AC?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Grades within 10 feet of structure conform to Section 1804 of 2019 California Building Code (or latest adopted code)? (5% slope for unpaved areas and 2% slope for paved areas)  |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan shows location of proposed/existing buildings?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan shows finished floor and pad elevations of new buildings?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan shows finished grade elevations at building corners?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan shows cross-sections at critical points along boundary?   |
| <input type="checkbox"/> | <input type="checkbox"/> | No abrupt grade changes at the property or boundary line?  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Overland release path and its elevation shown?</b> Use standard large arrow (small thin arrows are for typical drainage flow in a non-failure situation). Must illustrate where stormwater flows in the event of a total failure of the entire underground drainage system.                             |
| <input type="checkbox"/> | <input type="checkbox"/> | No excessive or concentrated flow into adjacent properties?  |
| <input type="checkbox"/> | <input type="checkbox"/> | If Overland Release is directed into an adjacent parcel, has a proper easement been provided to allow such drainage?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Plan shows all surface and subsurface drainage devices?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Rim and invert elevations shown?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Pipe materials, slopes and sizes shown?  |
| <input type="checkbox"/> | <input type="checkbox"/> | All storm drain inlets marked with stormwater pollution prevention message "No Dumping - Flows to Bay"?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Drainage away from garage(s)?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Ponding less than 1 foot in depth?   |

**Yes    N/A****ITEM OR DESCRIPTION****STORMWATER (C.3) PLANS TECH. REVIEW**

<input type="checkbox"/>	<input type="checkbox"/>	Completed C.3 Data Form included?
<input type="checkbox"/>	<input type="checkbox"/>	The Stormwater Control Plan (SWCP) clearly indicates the following: all Treatment Control Measures (TCM's), distinct drainage boundaries for each TCM (drainage boundaries can't share TCM's), details for each type of TCM, installation and long term maintenance notes for each type of TCM and TCM summary Table?
<input type="checkbox"/>	<input type="checkbox"/>	Drainage arrows are shown to identify where and how stormwater runoff will enter the Bioretention areas (i.e. bubbler box, curb cuts, etc.)?
<input type="checkbox"/>	<input type="checkbox"/>	All downspouts shown to indicate where and how roof drainage will enter Flow-Through Planter (FTP)?
<input type="checkbox"/>	<input type="checkbox"/>	Energy dissipators (cobbles or rocks) are shown to avoid erosion at the point where runoff enters the Bioretention or FTP area?
<input type="checkbox"/>	<input type="checkbox"/>	Overflow structures are located away and not directly in line with curb openings?
<input type="checkbox"/>	<input type="checkbox"/>	Perforated pipe underdrain system shown within Bioretention or FTP area with length, slope and material called out on grading plan or stormwater utility plan?
<input type="checkbox"/>	<input type="checkbox"/>	Rims and inverts called out at clean out and overflow riser and are in-line with the Bioretention and FTP details on grading plan or stormwater utility plan?
<input type="checkbox"/>	<input type="checkbox"/>	Perforated pipe underdrain system shown within Pervious Paver/Concrete areas with cleanouts shown and length, slope, pipe material called out on grading plan or stormwater utility plan?
<input type="checkbox"/>	<input type="checkbox"/>	Rims, inverts and top of subgrade elevations called out at clean outs in-line with the Pervious Paver/Concrete details on grading plan or stormwater utility plan?
<input type="checkbox"/>	<input type="checkbox"/>	All curb openings shown on Grading and Drainage plan?
<input type="checkbox"/>	<input type="checkbox"/>	Curb openings spaced a minimum 10' apart?
<input type="checkbox"/>	<input type="checkbox"/>	Curb openings <u>do not</u> line up with overflow riser structure?
<input type="checkbox"/>	<input type="checkbox"/>	All appropriate details included on SWCP or Detail sheet (Bioretention, FTP, curb opening, bubbler, etc.)?
<input type="checkbox"/>	<input type="checkbox"/>	A 2-inch minimum drop from flowline to finish grade of landscape is provided?
<input type="checkbox"/>	<input type="checkbox"/>	Height of FTP planter wall or curb adjacent to Bioretention areas does not exceed 4' in total height (top of wall to bottom of footing)? If Yes, see Retaining Wall Section below.
<input type="checkbox"/>	<input type="checkbox"/>	Drainage Management Area's (DMA) shown clearly on SWCP?
<input type="checkbox"/>	<input type="checkbox"/>	DMA's contain only one Treatment Control Measure (TCM) and TCM is appropriately sized?
<input type="checkbox"/>	<input type="checkbox"/>	SWCP contains new TCM sizing calculations for any DMA boundaries revised since Planning approval?
<input type="checkbox"/>	<input type="checkbox"/>	Values shown on the Treatment Control Measure Summary Table are correct?
<input type="checkbox"/>	<input type="checkbox"/>	Operation and Maintenance Information included for all TCM Types?
<input type="checkbox"/>	<input type="checkbox"/>	Site specific Source Control Measures, Site Design Measures and Responsible Party included on SWCP?
<input type="checkbox"/>	<input type="checkbox"/>	Landscape plans include plantings within the bio-retention and Flow-Through Planter (FTP) areas that are compliant with Appendix D of the SCVURPPP C.3 Stormwater Handbook?

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Yes    N/A

ITEM OR DESCRIPTION

***EROSION CONTROL PLAN REVIEW***

<u>      </u>	<u>      </u>	Plan drawn clearly? (Topo and all text is legible)
<u>      </u>	<u>      </u>	Plan on 24" x 36" sheets?
<u>      </u>	<u>      </u>	Plan identifies locations for erosion control measures proposed?
<u>      </u>	<u>      </u>	Plan protects all adjacent properties?
<u>      </u>	<u>      </u>	Plan protects all adjacent streets?
<u>      </u>	<u>      </u>	Plan protects all stormwater inlets (on-site and off-site)?
<u>      </u>	<u>      </u>	Plan includes details for erosion control measures proposed?
<u>      </u>	<u>      </u>	Plan includes Best Management Practices (BMP) Summary Table and is filled out with the BMPs being implemented on the site?

***RETAINING WALL PLAN REVIEW***

<u>      </u>	<u>      </u>	Plan drawn clearly?
<u>      </u>	<u>      </u>	Plan on 24" x 36" sheets?
<u>      </u>	<u>      </u>	Plan contains north arrow, legend, and scale? (if applicable)
<u>      </u>	<u>      </u>	Plan contains all applicable general notes, procedures for installation of retaining wall, special inspection items, materials, etc.?
<u>      </u>	<u>      </u>	All applicable details for retaining wall construction? (foundation, material specifications, reinforcement, etc.)
<u>      </u>	<u>      </u>	Structural calculations prepared by a licensed Engineer?